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Novel Physics and Practical Applications of Transformation Optics and Optical Mode Conversion

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Deadline for manuscript submissions:
closed (31 March 2021)

Message from the Guest Editors

Dear Colleagues,

In the last decade, the possibility of structuring and tailoring the phase and intensity distributions of light has attracted increasing interest, exhibiting disruptive and promising applications in a wide range of fields: optical manipulation, high-resolution microscopy, mode-division multiplexing in telecoms, high-order modes of control, and high-dimensional quantum cryptography. Concurrently, remarkable efforts have been devoted to the design and fabrication of novel optical elements and effective materials in order to perform light reshaping, mode generation and conversion, and optical coordinate transformations.

The topics of this Special Issue include, but are not limited to, optical coordinate transformations, multi-plane light conversion, high-order beam generation and manipulation, and mode switching and routing. This Special Issue will cover all the techniques and methods that can be used to control and reshape the electromagnetic field: diffractive optics, metasurfaces, metamaterials, plasmonics, photonics, etc.

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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